

24 Port Fast Ethernet With 2 Port Gigabit Switching Hub

User's Manual

Model # ANS-2402G

FCC Warning

This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to Part 15 of the FCC Rules. These limitations are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into a different outlet from that the receiver is connected.
- Consult your local distributors or an experienced radio/TV technician for help.
- Shielded interface cables must be used in order to comply with emission limits.

Changes or modifications to the equipment, which are not approved by the party responsible for compliance could affect the user's authority to operate the equipment.

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1 Introduction to the Switching Hub

1.1 General Description

This device is a high-performance 24 port Fast Ethernet with 2 port Gigabit Ethernet switching hub capable of 10, 100 and 1000Mbps auto-negotiation operation. This switching hub comes with complete set of industry standard features for high-speed Internet access, it also offers easy installation and cost-effective connection for corporate users.

All 26 ports support Store & Forward architecture, Broadcast Storming Filter and TP interface Auto MDIX for auto TX/RX swap.

1.2 Features

Compliant with 802.3u 100Base-TX

Compliant with 802.3ab 1000Base-TX

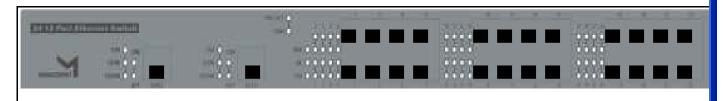
Fast Ethernet port works at 10 Mbps or 100 Mbps in full or half duplex mode, and Gigabit Ports work in full duplex mode.

Support Store & Forward architecture

Perform Broadcast Storming Filter function

Support TP interface Auto MDIX function for auto TX/RX swap

1.3 The Front Panel



Functional LED Description

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LED	Description				
PWR	When Gigabit switching hub connects to power, this LED will be on.				
BK	When Broadcast Storm occurs, this LED will blink.				
124	Fast Ethernet Port LED numbers.				
25, 26	Gigabit Port LED numbers.				
Link/Act	Link is established (green), Transferring data (blinking green), No connection (off)				
10M	When data transferring rate is 10Mbps, this LED will blink, otherwise LED is off.				
100M	When data transferring rate is 100Mbps, this LED will blink, otherwise LED is off.				
1000M	When data transferring rate is 1000Mbps, LED will blink, otherwise LED is off.				

1.4 Uplink Port

All ports can be used as an uplink for connecting to another unit without using crossover cable.

1.5 The Rear Panel

Rear Panel of the switching hub has a vent, power cord socket and a switch.



1.6 What items come with package

One 24 Port Fast Ethernet with 2 Port Gigabit switching hub

One 100V ~ 240V Power Cord

One 24 Port Fast Ethernet with 2 Port Gigabit Switching Hub User's Manual

2 Installing & using the 26 Port Fast Ethernet/Gigabit Switching Hub

2.1 Power Connecting

Plug the circle end of the power cable firmly into the power cord socket of the rear panel of the switching hub, and the other end into an electric outlet then the system

is ready.

2.2 Installing

The hub does not require install device driver. Users can immediately use any of the features of this product simply by attaching the cables and connecting the power, then turn on the switch.

2.2.1 Desktop Installation

To locate the switching hub on the desktop and place the hub on a clean, flat desk or table close to a power outlet. Plug in all network connections and the power cable, then the system is ready

2.2.2 Installing Network Cables

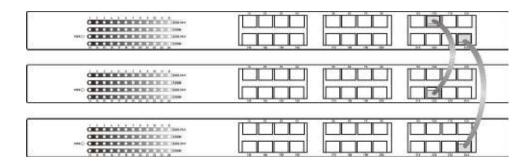
After placing the hub on the desktop, then we need to know how to connect the device to network.

2.2.2.1 Station Connections with Twisted-Pair Cable

Connect each station to the hub by a twisted-pair straight cable(10Base-T or 100Base-T cables). Plug one RJ-45 connector into a front-panel port of the hub, and plug the other RJ-45 connector into the station's network adapter.

2.2.2.2 Switch to Switch Connections with Twisted-Pair Cable

In making a switch to switch connection, you can use any port to connect Another switch with any cable.



3. Switch Operation

3.1 MAC Address Table and Learning

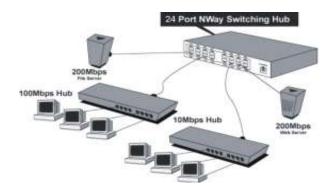
The switching hub is implemented with a MAC address table which is composed of many entries. Each entry is used to store the address information of network nodes on the network, including MAC address, port ID, etc. The information is the most important base to do packet filtering and forwarding. When one packet comes in from any port, the switching hub will learn the source address, port ID, and the other related information in address table. Therefore, the content of the MAC table will update dynamically.

3.2 <u>Filtering and Forwarding</u>

When one packet comes in from any port of the switching hub, it will check the destination address besides the source address learning. The hub will look up the address table for the destination address. If not found, this packet will be forwarded to all the other ports except the port which this packet comes in. If found, and the destination address is located at different port from this packet comes in, the packet will be forwarded to the port where this destination address is located according to the information of address table. But, if the destination address is located at the same port as this packet comes in then this packet will be filtered.

3.3 Store and Forward

Store-and-forward is one kind of packet-forwarding methodology. As a store-and-forward switching hub, it will store the complete packet in the internal buffer and do the complete error checking before transmitting to the network. Therefore, no error packets will disturb the network. It is the best choice when a network needs efficiency and stability.



Several things need to be avoided:

Keep Ethernet cables away from sources of electrical noise such as radios, transmitters, broadband amplifiers, power lines and fluorescent lighting fixtures.

Water or moisture can not enter the unit

Air flow around the unit and through the vents in the side of the case is not restricted

Never stack units more than eight high if freestanding

Do not place objects on top of any unit of stack

Do not obstruct any vents at the sides of the cases

4. Product Specifications

Standard IEEE802.3, 10BASE-T

IEEE802.3u, 100BASE-TX

IEEE802.3ab, 1000BASE-T

Interface RJ-45 x 26 Nway switching ports

Supports Auto MDIX

Cable Connections RJ-45 (10BASE-T):

UTP Category 3, 4, 5

RJ-45 (100BASE-TX):

UTP Category 5

RJ-45 (1000BASE-T)

UTP Category 5, 6

Network Data Rate Auto-negotiation (10Mbps, 100Mbps,

1000Mbps)

Transmission Mode Auto-negotiation

(Full-duplex, Half-duplex)

LED indications Power x 1, BK x 1

Port x 24, Link / Activity, 100M

Port x 2, 10M, 100M, 1000M, Link, Activity

Filtering / warding Rate: 10Mbps: 14,880pps / 14,880pps

100Mbps: 148,800pps / 148,800pps

1000Mbps: 1,488,000pps / 1,488,000pps

Operating Temperature 0-45 C (32-113 F)

Operating Humidity 10% - 90%

Power Supply AC(100~240) 50/60Hz Internal Switch Power